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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/577,479 | 04/27/2006 | Yuichi Aoki | 21604-00025-US1 | 8185 |
| 30678 7590 10/08/2008 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006 | | | | |
| EXAMINER | | | | |
| NGUYEN, THANH NHAN P | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2871 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 10/08/2008 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,479

Applicant(s)

AOKI ET AL.

Examiner

THANH-NHAN P. NGUYEN

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/88)
- Paper No(s)/Mail Date 7/16/07: 4/27/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Goto et al (US 5,694,245).

Goto et al disclose (Figs. 1, 2, 6; col. 7, lines 47-67; col. 8, lines 1-12) a rear projection display screen (14) comprising:

- a first optical member (40) which converts a diffusion light from a light source into a collimated light
- a second optical member (41) which converts the collimated light output from the first optical member to light having a proper output angle-luminosity distribution in the order from the light source side
- wherein at least a light-source side surface of the second optical member has a refractive index distribution

Allowable Subject Matter

Claims 2-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reason for allowance: There is no prior art of record that teaches or suggests a rear projection display screen comprising a relationship of various elements as claimed with the specific allowable subject matter cited in the following claims:

Claim 2:

- wherein the refractive index distribution is set to a gentle distribution such that the refractive index of a portion which is brought into contact with air assumes a lowest value and the refractive index of a portion remotest from the air assumes a highest value

Claim 3:

- wherein the refractive index distribution is set by changing an average refractive index which is determined based on an abundance ratio between a plurality of convex portions formed on a surface of the second optical member and air which fills gaps defined between the convex portions in the direction perpendicular to the surface of the second optical member

Claims 6-8 are allowed since they depend on allowed claim 2.

Claims 4 and 5 are allowed since they depend on allowed claim 3.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hasegawa (US 2005/0018148) discloses a projection-type display apparatus includes a screen having a prism, and a projection optical system for guiding image light to the screen. The projection optical system includes a plurality of optical elements. An optical element disposed nearest to the screen on an optical path of the image light among the plurality of optical elements is a mirror.

Zou et al (US 6,106,128) disclose an illumination system has separate components for extracting and directing light from a waveguide. The system eliminates the need to provide a light directing array (LDA) that is optically and physically coupled to the waveguide. It is more reliable and robust than previous illumination systems and virtually eliminates the failures associated illumination systems having laminated LDAs.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

-- September 29, 2008
TN

/David Nelms/

Supervisory Patent Examiner, Art Unit 2871